DOCUMENT RESUME

ED 274 335 IR 012 324

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TITLE Computer Laboratory Management--Making Effective Use of Your Computers.
PUB DATE Feb 86
NOTE 59p.; Paper presented at the Ohio State Department of Education Computer Fair (Columbus, OH, February 1986).
PUB TYPE Guides - Non-Classroom Use (055) -- Speeches/Conference Papers (150) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Computer Software; *Design Requirements; Elementary Secondary Education; Environmental Influences; Equipment Maintenance; *Learning Laboratories; *Microcomputers; Policy; Program Effectiveness; *Program Implementation; Records (Forms); School Districts
IDENTIFIERS Software Evaluation

ABSTRACT

The information on the establishment and management of a school microcomputer laboratory that is provided in this paper emphasizes ways in which use of the facility by students can be maximized, and is intended for use by other districts that have or are establishing computer labs in their buildings. The Lancaster (Ohio) City Schools serves as a model for discussing concerns encountered in managing labs, and for providing descriptions of some of the techniques and methods that have proved successful in operating, managing, and controlling the computer hardware and software. Initial problems and other issues include a secure and accessible location; climate control; lighting and seating design; power requirements, including circuits, outlets and filtering equipment; lab size; computer security; lab staffing, including the use of volunteers; proficiency testing of students before computer use; maintenance, including policies and rate of service; staff training; the availability of an open lab for all students regardless of their academic levels; and establishment of rules and procedures for computer usage. Sample materials developed to help promote effective use of the lab and copies of licensing procedures, software lists, student worksheets and tests, and other items that were used in promoting and managing the Lancaster labs are attached. (DJR)

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Computer Laboratory Management - Making Effective Use of Your Computers

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ABSTRACT

Computer Laboratory Management - Making
Effective Use of Your Computers

Presented by: Jim Cowles, John Larabee, and Sue Hothem,
Lancaster City Schools

Effective use of a microcomputer laboratory in a school requires detailed preplanning for proper set-up of the facility, ongoing coordination of its use, and appropriate management of the laboratory and student access. These and other concerns relating to laboratory usage will be addressed during our presentation.

Most buildings in the Lancaster City Schools now have one or more computer laboratories. We will explore some of the concerns we have encountered in managing these labs and describe some of the techniques and methods that have proved successful in operating, managing, and controlling the computer hardware and software in our computer labs and with individual machines in our elementary and secondary schools. We will focus on some of the materials we have developed to help promote effective use of these facilities. We will consider problems and other issues encountered in our schools, including lab set-up, maintenance, software acquisition and review, housing software, student access, and staff training.

Our objective will be to help districts that have or are establishing computer labs in their buildings to manage these labs more effectively for the good of students and their learning, and in terms of the overall school setting.

The presentation will include a series of slides showing how our labs are set up and utilized, discussions by each of the presenters on problems unique to their grade levels and district concerns, and time for questions and a discussion of individual concerns. We will also have a packet containing examples, licensing procedures, software lists, control documents, and other items that we have used in promoting and managing our labs.

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Presentation Synopsis

Computer Laboratory Management - Making Effective Use of Your Computers

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Effective instruction use of microcomputers requires more than a purchase of hardware and software. It demands extensive planning for housing, care, coordination, and access to the equipment. The prime consideration must be availability, so that both students and staff can draw the best return from the investment.

Surveys have shown that most teachers world prefer to house microcomputers in a computer lab rather than individual classrooms. A plurality of teachers polled in the *Second National Survey of Instructional Computers* stated that placing computers in a lab was their first choice, with a division between a lab and individual classrooms a second choice. Economic realities generally preclude the purchase of a sufficient number of machines to permit every teacher to have multiple units in their classrooms, making the lab the best viable possibility to receive the greatest number of students the best access to the most hardware.

A computer lab can also produce other instructional benefits. Often when computers are placed in classrooms, the machine becomes the "property" of that teacher, generally someone in math or science. If all teachers are free to schedule use of the computer lab such barriers to use can be more effectively broken down, and the lab better utilized by instructors in all subject areas.

The availability of an open lab monitored by a staff member or volunteer also permits students to be assigned to the lab on an individual basis to receive remediation or enrichment by using instructional software keyed to the curriculum. In the secondary schools, students often demonstrate a willingness to go to the computer lab during study halls or other free times to run software assigned by their teachers, or to use other instructional packages that are available. These students are not playing games, they are not wasting time in a study hall, they are learning with the help of the computer.

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Ideally, planning for a computer laboratory facility will begin prior to the purchase of microcomputers. Where computers have already been purchased, then planning can be done to centralize several existing computers into a single (or multiple, depending on the amount of hardware) sites. The specific laboratory arrangements will obviously be dictated by the physical facilities available and the number of computers to be housed, but some concerns need to be addressed in the planning stages.

Our presentation at the Computer Fair will focus on some of the issues related to managing a computer laboratory in a school. We will discuss some of the problems we encountered during this process and examine some of the techniques used in our buildings. This report will deal with some initial problems that must be addressed in setting up a computer lab. These concerns include:

1. Location. All students must have access to the lab without architectural barriers blocking use. The lab room should be placed at some location that, while accessible, can be secured. Issues such as ventilation and heat build up must also be considered. Although air conditioning is generally not required for microcomputer labs, individual situations might necessitate its use.

2. Ergonomics. Although most classroom lighting may be ideal for learning, it is not ideal for the use of computers. Too many bright fluorescent lights will cause excess glare on the monitor screens. Seating and tables should be appropriate to permit the monitor and keyboard to be placed at a comfortable position for the student.

3. Power. Sufficient, clean electrical power must be available. Although the power requirements of a microcomputer are fairly low (1 amp for an Apple IIe, typical color monitor or printer, .3 amps for a typical green monitor, 1.7 amps for a TRS-80 Model IV), the total power requirements for all systems that are to be placed in the laboratory must be considered.

If feasible, separate power circuits that will service the computer lab should be installed. This will also help to isolate the computer lab from other power fluctuations in the school. Separate keyed switches can be placed in the lab for these circuits to minimize the possibility of unauthorized use of the computers.

Power filtering equipment is available in a variety of price ranges. We have not found the need for this type of equipment in our buildings, but others should weigh its costs and features versus the potential for damaging power spikes or dropoffs that may be prevalent in their areas.

4. Lab size. Hopefully, your school has yet to purchase its last computer. Plan a facility that will be large enough to hold the amount of hardware that you eventually wish to house there, not simply large enough to hold what you may have now.

5. Security. Most schools have had little problem with computer security. This issue must be considered in light of their own situation. Generally, it is best if the lab is not directly accessible from the outside and can be securely locked. Many schools have elected to install a windowless door in the lab to deter breakins.

Individual lock-down devices are available from several vendors. These range from bolting systems to special locking cables to help prevent theft of individual units. When considering these devices, avoid those that prevent access to the inside of the computer for easy exchange or installation of circuit boards.

6. Staffing. Someone should be assigned to coordinate the scheduling and use of the computer lab facility in the building. This should be done by someone in the building. Without a single coordinator, trying to effectively use the lab on a building-wide basis is difficult, if not impossible. The person who is assigned to this duty should be given adequate time to coordinate and promote the use of the lab. This person can also be responsible for the control of software and trouble-shooting the equipment.

Throughout the day, the lab can be staffed in a variety of ways. Many schools utilize parent volunteers to keep the lab open. In others, teachers are assigned to the lab in lieu of study halls or other duties. Some districts have hired paraprofessionals for this purpose.

7. Access. Students must be permitted access to computers throughout the school day. Although there will be times when the lab will be closed to permit an entire class to use the computers, it is hoped that there will be a great deal of freedom for students to use the lab in the same way they currently use the library.

It is important that all students, regardless of their academic level, be permitted access to the computer. These machines are tools for the poorer student to learn, not just for the better students. Yet, before any student should be permitted to use any hardware, they should demonstrate some degree of proficiency in its use.

In the Lancaster City Schools, students must pass a proficiency test in order to receive an "operator's license" to use the computers. This test covers the basics of powering on a computer, care and use of diskettes, the keyboard, and other simple items to permit the students to use the computer with as little assistance as possible. Licensing is done through the classroom teachers, media centers, and parent volunteers.

Access outside the normal school day must also be considered. Many students may be unable to use the lab during the normal instructional day. These students would prefer a before or after school time for computer use. Some districts have arranged to open labs in the evenings and weekends for students, teachers, and, in some cases, adults.

8. Maintenance. The question is not, "Will the computer break down?" The issue is really "What will I do when the computer breaks down?" Make arrangements for service before equipment is purchased. Be certain that you know the policies and rates for service. Be certain that you know whether repairs will be done by individual component or on a board-exchange basis (at a potentially great difference in cost), and whether the repairs will be done locally. Many service centers or dealers will provide a guaranteed turn-around time for most problems.

If the computer is going to be a vital part of the overall instructional program, then it is essential to insure the availability of reliable hardware. After all, nothing seems more useless than a broken computer.

9. Staff training. If teachers do not know how to use the computer or what software is available for use, then the computer lab will not be used. Before the machines arrive, make arrangements to train the staff on their use. Demonstrate software that is available or may be purchased. Inform your staff as new software is acquired. Administratively, encourage your teachers to know how to use the computer and to use it in their instruction.

Training of this type can be done in a variety of ways. Teachers can be taught through in-service programs, staff meetings, or university workshops. This training should be on-going, to avoid the problem of the teacher who was taught to use it once, but never encouraged to use the training.

A disturbing statistic from the national survey is that over 65% of schools had fewer than six teachers regularly using computers. With effective training, these numbers can be increased.

10. Rules. Establish rules and priorities for computer use. These rules should address issues such as the length of time a student will be permitted to use a computer, the number of students per station, the use of software, students bringing in their own software, and other concerns. These rules must be clear, understood by all using the lab, and enforced.

These ten concerns barely touch on some of the issues raised in setting up and managing a computer lab. Issues such as software acquisiton, housing, and control have not been mentioned. These concerns, as well as examples of means of handling some of the issues presented above on an initial and ongoing basis, will be the focus of our presentation at the computer fair.

Tallmadge elementary school is a school with a population of about 580 students K-6 from a middle to low socio economic community. With the adoption of a Junior and Senior High Curriculum in computer literacy, the staff and principal saw a need and the possible benefits of a computer lab for students to become computer literate and practice using the computers. The other benefit is using computer software as a means to extend curriculum areas. The computer is found to be an excellent tool for enrichment for the gifted student and a great tutor for students needing extra help in weak areas. Since parents enjoy knowing about computers, they have been motivated in becoming aides to help moniter and instruct our students in the proper use of software. The average student is the prime user of the computer and finds it enjoyable to use in effort to extend knowledge in curriculum areas.

The computer lab contains four apple IIe computers with double disk drives and two printers. The computers are neatly spaced on wall attached work tables with wiring behind the computers plugged directly into grounded
electrical outlets. The room contains shelving above the computers for software and manual storage. The room has one chalkboard and bulletin board. It is carpeted throughout and has two access doors that are bolt locked each night.The room is located in the center of an open area off the library and off a group of classrooms from the opposite side.

Two more computers are on carts for classroom use and can be signed out by a classroom teacher for use in computer instruction, software introduction, or drill and practice to extend curriculum areas. These computers are Apple IIe's with Imagewriter color printers, monitors, double drives, and joysticks.

Another computer is housed in the learning disability classroom for use in instruction. It is an Apple IIc with pinter and built in disk drive.

One other computer is a Rainbow and is used by the office for word processing and office jobs.

The final computer is used by our librarian for cataloging books and eventually, by next year, as an electronic check in and checkout system. It is and Apple IIe with Imagewriter printer and double disk drive. Its usage should keep down the loss of books and media materials.

COMPUTER RULES

1. You must have a computer license issued by the library. This license must be presented to use the computer.

2. Sign the computer log. Changes in log may only be made by your teacher and library staff.

3. When your time's up -- it's up.

4. One person types -- one person watches and helps. Switch next time. No spectators.

5. Handle equipment and software with care. Please don't pound on the keys.

6. Do not turn the computer off without permission of a volunteer.

7. If you have a problem, ask the volunteer or the librarian immediately for help.

8. Observe copyright restrictions.

9. Loud talking, horseplay or misuse of the computer will result in the loss of your computer license.

10. You are responsible for walking directly to and from the Library Computer Room, quietly and quickly.

IF YOU DO NOT FOLLOW THE RULES, YOUR LICENSE WILL BE REVOKED.

If you have a question, ask!

Mrs. Carroll

OBJECTIVES: The volunteer will turn the computer on and off and boot disk successfully.

The volunteer will become familiar with the basic keyboard and special keys of the computer and demonstrate their use.

The volunteer will become familiar with the operation and care of each part of the computer.

MATERIALS

2 computers (located in computer room)
Software
The friendly Computer (practice)
Apple Presents Apple (tutororial)
Dittos - (Computer Volunteer Booklet)
The graphics disk

PROCEDURE:

1. Go through background information presented in dittos as a basic general introduction. Use graphics disk as a motivator.

2. Demonstrate turning the computer on and off and how to boot a disk.

3. Load Apple Presents Apple. Instruct them to begin reading instructions as typing in entries.

4. After they have finished loading, instruct them to practice by working through The Friendly Computer. Reinforcement: Daily loading and reviewing of other software programs to be used by children.

THIS IS A SECOND AND THIRD GRADE EXAMPLE

Instructor: Your objective is to test students on correct loading and unloading procedure. Follow the following steps as a guideline.

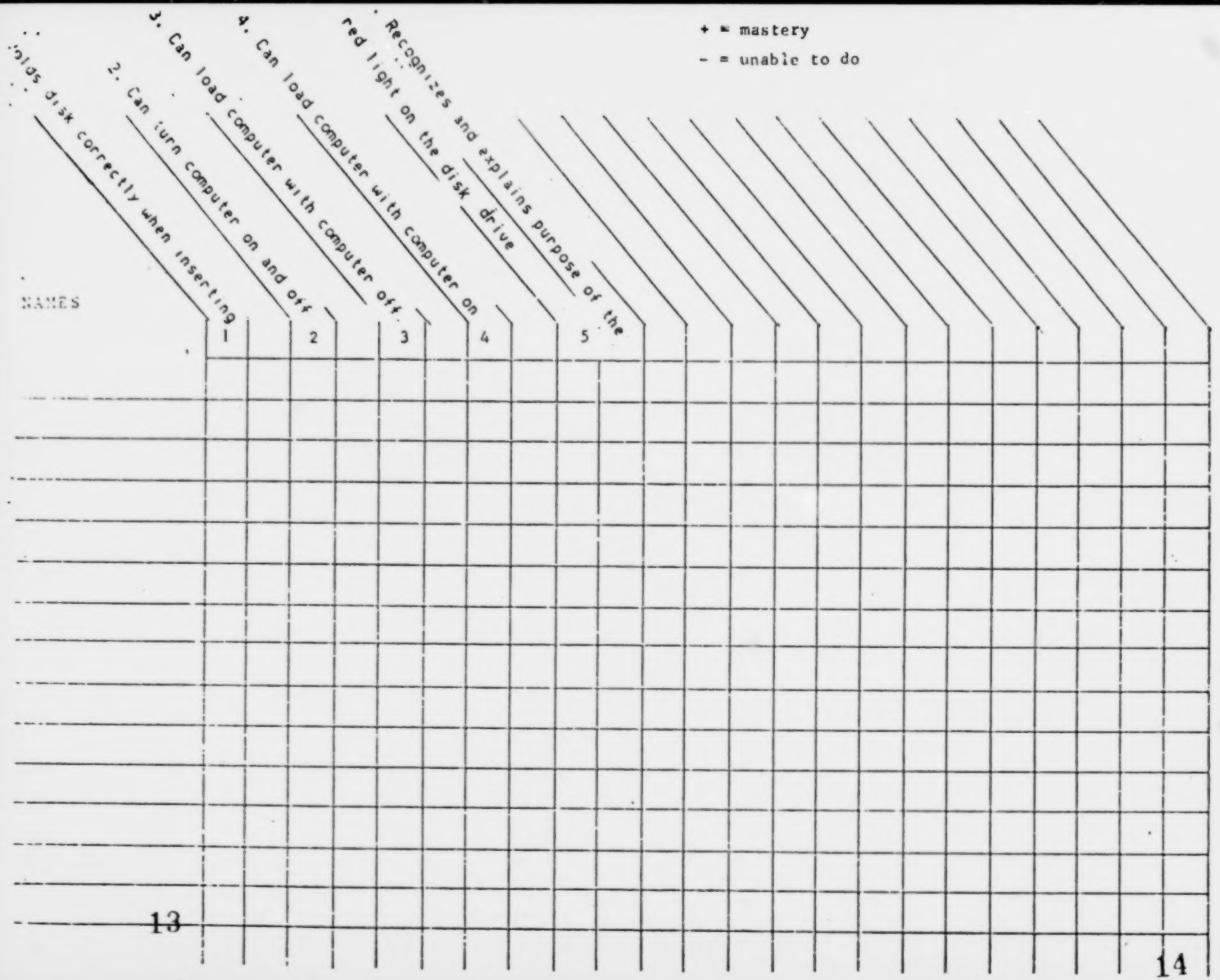
1. Talking student through unloading and loading of computer using steps listed below should be done first.

2. The second time through ask student to do it without your help. You may prompt the student if he/she needs the encouagement, but avoid totally giving student the answer.

3 The second time through use check sheet below to aid in recording process. Make notes if they have any serious problems unloading or loading the computer. Use any program for loading and unloading the program, you need not go all the way through it.

+ = mastery

- = unable to do


1. Holds disk correctly when inserting
2. Can turn computer on and off
3. Can load computer with computer off
4. Can load computer with computer on
5. Recognizes and explains purpose of the red light on the disk drive
NAMES
1
2
3
4
5

GETTING SOFTWARE PREVIEWED

Dear Fellow Staff Members:

We are getting a great array of computer software into our little domain. What is it? Who can use it? Is it suitable for your students? Believe me I certainly don't know.

Wouldn't it be nice if each program had a subject card much like book in the library. We know you don't have enough time to catalogue each of the hundreds of computer programs we hope to have someday, and neither does anyone else. How about if we all work together on it.

What we are asking is: If you are familiar with a program could you fill out one of the attached cards and slip it into Steve Scott's mailbox. He will see that your card is properly catalogued.

All teachers will be given a copy of each program's card so they know what is available. Extra copies could be made so that when a student is sent down to work on the computer, he or she could take the appropriate card with them, and the library personnel could be sure of what the student was to work on. A file will be also set up in the computer room by subject and author.

With gratitude,
Steve Scott

Subject: _____ Title: _____

DISK NO._____.

Company _____

MENU NO._____

_____ Suggested grade level_____

List brief description of contents:

_____
_____
_____
_____
_____

COMPUTER LOG

COMPUTER #_____ Week of ___/___/___

Staff may reserve time periods for class instruction and usage. Students may use on a first come basis. No more than 4 students should be sent at a time. You need to plan ahead with Mrs. Carroll for the programs your students will be using.

DIRECTIONS: Sign your last name and grade. (Ex. Smith 6L)

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Staff 8:00- 9:00					
9:00- 9:30					
9:30-10:00					
10:00-10:30					
10:30-11:00					
11:00-11:30					
11:30-12:00					
12:00-12:30					
12:30- 1:00					
1:00- 1:30					
1:30- 2:00					
2:00- 2:30					
2:30- 3:00					
taff 3:00- 4:00					

Signing means you have read the computer rules and agree.

TALLMADGE ELEMENTARY SCHOOL

511 LEWIS AVENUE • LANCASTER, OHIO 43130

ROBERT C. SPIETH
SUPERINTENDENT

DIANE EVERSOLE
PRINCIPAL

January 28, 1985

Dear Tallmadge Computer Angel,

When some of you were recruited I had indicated it would be until Christmas. Once we started, however, the entire process worked better than we expected -- THANKS TO YOU. Our original goal was to train our fifth and sixth graders but we soon recognized the younger students could benefit also. You have now been a part of that process for which we are grateful.

I hope I have not been too presumptuous by scheduling you in for the month of February. We will begin training our third grade students on February 11. After they are trained we will back off on this aspect of our computer use until October, 1985 when we will teach the third grade (our present second graders) then the second graders in November and, hopefully, our first grade in January, 1986.

Once we have the third graders trained we could get by with volunteers in the Computer Lab three (3) days per week if you are unable to continue to donate your time.

Please phone me at 687-7336 to let me know if:

1. There are any dates on the attached calendar when you can't come.
2. If you will not be able to volunteer, or would like to decrease coming weekly, after February.
3. If you have any suggestions or questions.
4. Please let us know if you will be a par: of the training process beginning next October.

This have been a very exciting process. By next year we would like to train some of our top students in basic language to allow them to begin writing their own programs. All of this has come about because of our computer committee made up of:

John Larabee	Kim Sinewe
Steve Scott	Janie Carroll
Janice Barnes	Diane Eversole

and Mr. Larabee working with YOU has really been successful.

Thank you for your assistance.

Sincerely,

Diane Eversole

(Mrs.) Diana W. Eversole

If above program/s are not available please:

___ send the student back to the classroom
___ select a program that you feel is appropriate from the above listed area
___ allow the student to select any program s/he wants to run

* *

TO BE COMPLETED BY VOLUNTEER:

Please let me know about my student's behavior

___ behaved appropriately
___ voice level was quiet and appropriate
___ followed all directions
___ disc door shut after use and program returned to you

✓ means this was accomplished

Student's Name _____

	PROGRAM TITLE	DEWEY #	MENU ITEM
___	Adventures with fractions	MCP 513.2-ADV	_____
___	Bank Street Writer	MCP 631.7-BAN	_____
___	Computer Generated Math	MCP 510-COM	_____
___	Early Addition	MCP 513-EAR	_____
___	Electronic Grade Book	MCP 371.272-ELE	_____
___	Electronic Money	MCP 332-ELE	_____
___	Elementary Math	MCP 510-ELE	_____
___	Elementary Social Studies	MCP 300.-ELE	_____
___	Geometry - Vol. 8	MCP 516-GEO	_____
___	Geometry - Vol. 10	MCP 510-GEO	_____
___	Graphing	MCP 511.-GRA	_____
___	Growgins' Fractions	MCP 513.26-GRO	_____
___	Guessing Who and Thinking	MCP 153.4-GUE	_____
___	Language Arts	MCP 425-LAN	_____
___	Math/Science	MCP 500-MAT	_____
___	Measurement	MCP 389-MEA	_____
___	Micro Computer Software	KIT 001-64-DOM	_____
___	Microzine - 7th Ed.	MCP 001-64-MIC	_____
___	Microzine - 8th Ed.	MCP 001-64-MIC	_____
___	Microzine - Premier Ed.	MCP 001-64-MIC	_____
___	PFS File	MCP 651.5-PFS	_____
___	Problem Solving Strategies	MCP 510.76-PRO	_____
___	Social Studies	MCP 330-SOC	_____
___	Spelling - Vol. 1	MCP 421-SPE	_____
___	Spelling - Vol. 2	MCP 421-SPE	_____
___	The Friendly Computer	MCP 001-64-F	_____

In Black Disk Container:

___	Gr. 4,5,6 States and U.S. Maps	_____
___	Language and Spelling of Months, Contractions, Spelling, Spell Days, Library of Vocabulary	_____
___	Graphics	_____
___	Math Flasher, Math Game, Bingo Times Tables	_____
___	Mastertype Typing Program	_____

October-1985
MONTH

COMPUTER VOLUNTEER SCHEDULE

8:30-11:30 / 12:45-3:15

Monday	Tuesday	Wednesday	Thursday	Friday
Sept. 30 Closed / Star / Hitchcock	1 Janice Boch / Tom / Carrel	2 Linda Poling / Sue / Shook	3 Judy Conrad / Tom / Carrel	4 Tiki Booth / Closed
7 Closed / Star / Hitchcock	8 Janice Boch / Tom / Carrel	9 Closed / Fair Day	10 Judy Conrad / Tom / Carrel	11 Tiki Booth / Closed
14 Closed / Star / Hitchcock	15 Janice Boch / Tom / Carrel	16 Linda Poling / Sue / Shook	17 Judy Conrad / Tom / Carrel	18 Closed / COTA Day
21 Closed / Star / Hitchcock	22 Janice Boch / Tom / Carrel	23 Linda Poling / Sue / Shook	24 Judy Conrad / Tom / Carrel	25 Tiki Booth / Closed
28 Closed / Star / 20 Hitchcock	29 Janice Boch / Tom / Carrel	30 Linda Poling / Sue / Shook	31 Judy Conrad / Tom / Carrel	Nov. 1 Closed / Parent Conferences 21

COMPUTER LICENSING PROGRAM

Each student must meet the following requirements.

1. Use the APPLE PRESENTS APPLE introductory keyboard. program with a trained volunteer.
2. Take a WRITTEN TEST over the enclosed information. The test difficulty and passing score is determined by grade level.
3. Take a PRACTICAL TEST demonstrating knowledge of the enclosed information. Test difficulty and passing score is determined by grade level.

COMPUTER LICENSING PACKET INCLUDES:

1. Equipment Identification
2. The Disk
3. The Care and Handling of the Disks
4. The Disk Drive
5. How to Boot the Disk
6. Apple IIe Practice Keyboard with Typing Hints
7. Apple IIe Key and Computer Terms
8. How to get a Catalog (USING DOS 3.3 MASTER DISK)
9. Computer Rules

COMPUTER RULES

1. You must have a computer license.
2. Sign the computer log.
3. When your time's up--it's up.
4. One person types-- one person watches and helps. Switch next time.
5. Handle equipment and software with care. Please don't pound on the keys.
6. Do NOT turn the computer off.
7. Computers do not eat or drink. No food or drinks near the computer.
8. Observe copyright restrictions.

IF YOU DO NOT FOLLOW THE RULES, YOUR LICENSE WILL BE REVOKED.

BEST COPY AVAILABLE

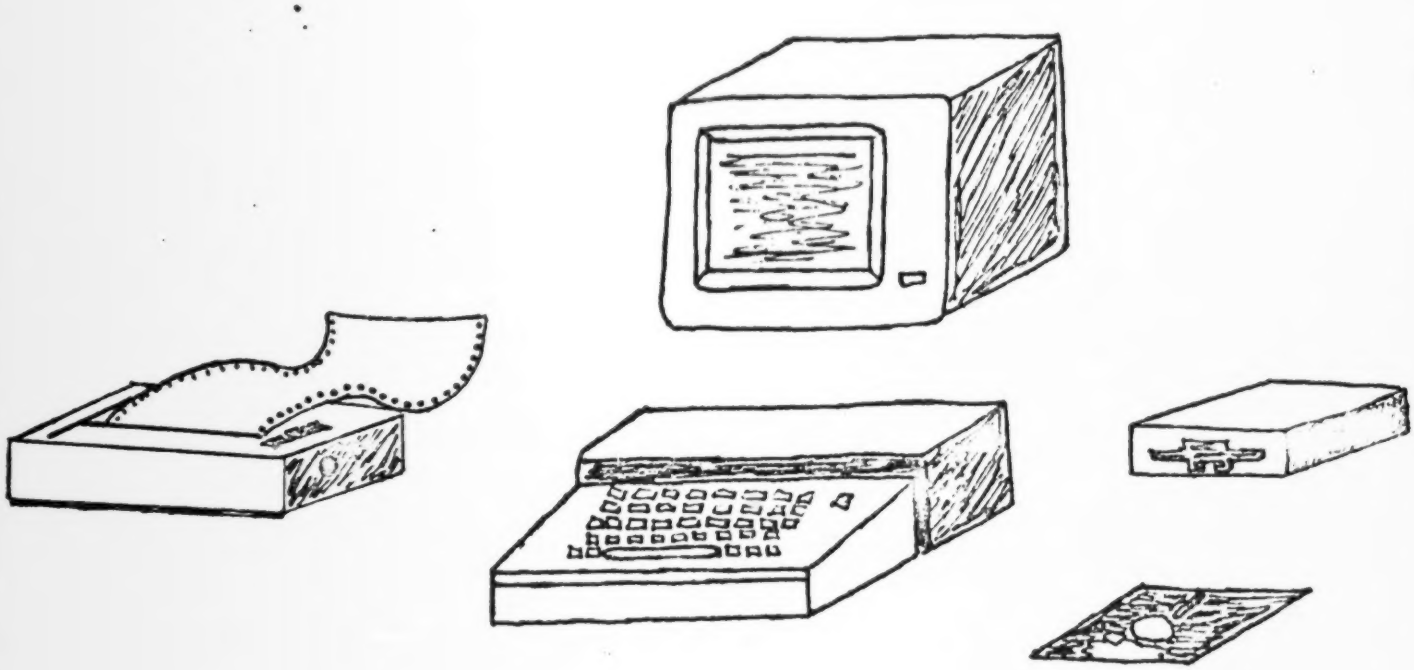
EQUIPMENT IDENITFICATION

A computer system may include any combination of external equipment. These pieces of equipment are commonly called peripherial devices. The following pieces of equipment, peripherial devices, are connected to the computer by interface cables and electronic circuit boards,which are called interface cards:

COMPUTER
KEYBOARD (BUILT IN)
MONITOR
DISK DRIVE OR CASSETTE DRIVE
PRINTER
DISK (FLOPPY, DISKETTE)

The Apple IIe Computer, you will be tested on, has a built-in keyboard, a monitor, an external disk drive, and may have a printer. This computer has "64K" of RAM (Random Access Memory) and "16K" of ROM (Read Only Memory). The "K" is short for kilobyte. This is how the computer memory is measured. One "K" is equal to 1024 bytes.

LABEL THE EQUIPMENT, PERIPHERAL DEVICES, AND INTERFACE OR CONNECT TO THE COMPUTER.



DISK (DISKETTE OR FLOPPY)

A disk may be called either a diskette or a floppy, any of the three terms is correct. The diskette can be rigid of flexible. The diskette is defined to be a flat, flexible platter usually 8 inches or 5.24 inches in diameter, capable of storing between 200 kilobytes and 1 megabyte of data,or information. The diskette is permanently housed inside a square vinyl, protective envelope. The disk has a write-protect notch on the upper right side . This notch is called a Write-protect notch because it can be covered over with a tab. The tab keeps the computer from writing onto the disk. The data or information is stored on the disks in a series of magnatized spots (much like cassettes). If you were to touch any of the "shinny parts" your body chemicals would eat the magnatized material off as well as your data.

THE CARE AND HANDLING OF THE DISKETTES

1. Handle each disk by placing thumb on the label or jacket. Do not touch the shinny parts.

2. Do not bend or fold the disk.

3. Do not use hard objects on the disk (pens, pencils, paper clips, etc.)

4. Store the disks in their envelopes when not in use. Also be sure to store them in an upright position (do not stack). These precautions will prevent warping of the disk as well as keep them dust free.

5. Keep disks away from magnets, electrical appliances, and large motors (especially televisions and telephones). (It's ok to lay them temporarily on the computer or disk drive.)

6. Insert and remove disks from the disk drives carefully.

7. Disks should not be in an area that may become extremely hot, cold, or wet. The safest temperature range is between 50 to 100 degrees Fahrenheit.

8. Place a write-protect tab on all master disks and other disks with important information stored on them.

9. Use the disk labels to label what is on each disk. Write on the label before putting the label on the disk. Do not write or erase directly on the disks.

The External Disk Drive

A disk drive is a piece of equipment, also known as a peripherial device, that loads, or reads, information from disks into the memory of the computer and saves, or writes, information from the memory of the computer onto a disk.

INSERTING THE DISK INTO THE EXTERNAL DISK DRIVE

1. If the computer is turned on, make sure that the red In Use light is not on before inserting the disk. The In Use light will glow red if the drive is working.

2. Lift the small door on the front of the disk drive.

3. Holding the disk by the label or the jacket, remove it from the envelope.

4. Gently put disk into slot, oval-cutout end first, label side up. Becareful not to bend or force the disk into the disk drive.

5. When the disk is completely inside the disk drive, close the drive door until it clicks shut.

How to "BOOT THE DISK" or Starting DOS

DOS is short for the Disk Operating System. The DOS is a program that, among other things, controls the way information is loaded into memory, the way the computer works with the information, the way information is stored on a disk, and the way the computer talks to printers and other peripheral devices.

A. When the power is presently turned off - Cold Start

1. Turn in the monitor.
2. Insert the disk into the disk drive 1.
3. Close the door on the disk drive.
4. Turn on the computer. The on/off toggle switch is in the back of the machine on the left side.
5. You will hear the motor in drive 1 and the red In Use light will come on.

*NEVER REMOVE A DISK WHEN THE RED IN USE LIGHT IS ON.

B. WHEN THE POWER IS ALREADY TURNED ON - WARM START

1. Be sure the red In Use light on the disk drive 1 is off.
2. Carefully insert the disk into the disk drive.
3. Close the disk drive door.
4. Hold down the OPEN APPLE key, the CONTROL- key and press the RESET key all at the same time. Then release all three keys.

5. Or another way is to type - PR#6 followed by the return key. Inside the computer there are seven slots for peripheral devices. PR stands for peripheral request. The reason you type #6 is that the disk drives are usually in slot #6.

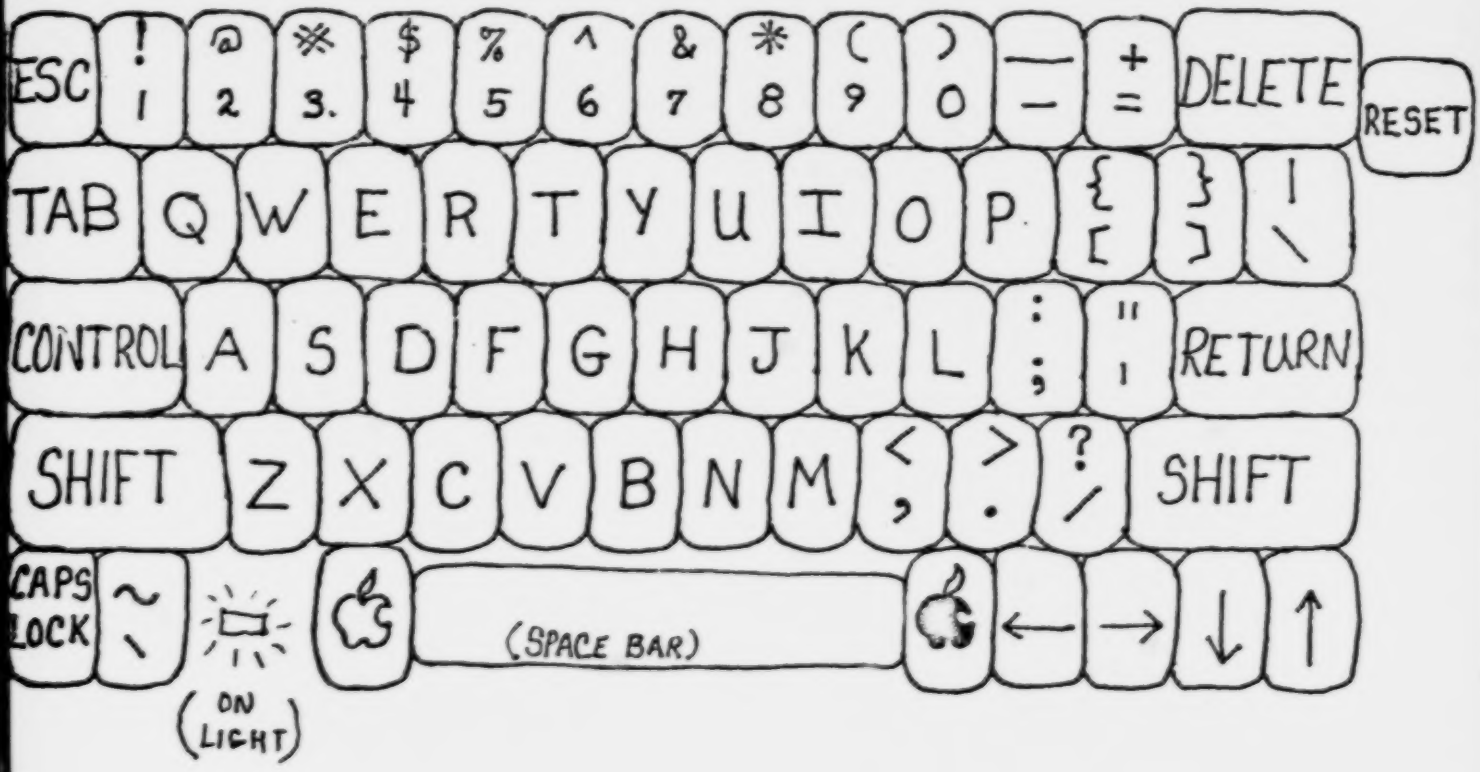
C. OOPs! I FORGOT SOMETHING.

1. If you accidently turn on the computer before you put a disk into the disk drive just press the CONTROL-key and the RESET key at the same time. These keys will make the cursor appear on the screen and the disk drive will quit searching for a disk.
**NOTE: IF THE DISK SEARCHES FOR A LONG TIME WITH NO DISK IN THE DRIVE IT MAY DAMAGE ITSELF.

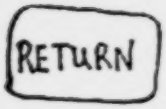
2. If you accidently turn the computer off, but you really need for it to be on, please wait at least 15 seconds before turning the power back on. This will give the computer's memory a chance to clear.

TYPING HINTS

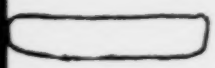
1. Check your typing before pressing the return key.
2. The numeric zero (0) and the alphabetic (O) are different in appearance as well as messages sent to the computer.
3. You can retype a line to correct typing errors or you can use the arrow keys to move the cursor to the error. (When Programming, you may type the line number and the correct information to change a line or retype the line number and nothing else to erase a line.)
4. Hold the shift key down to type what's on the top of the key and to produce single capital letters.
5. The Caps Lock key will also produce capital letters. This key is used for computer commands like "Run" (a command to run a program). The Apple IIe computer usually requires that the Caps Lock key be down from the beginning to the end of the running of a program.



APPLE IIe KEYS AND COMPUTER TERMS

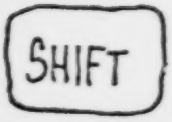


RETURN-KEY Sends information to computer when you are finished typing or reading. Press this key to continue or, in some programs, to get out of if you are stuck.



SPACE-BAR The space bar puts spaces between characters (the letters or numbers). On a computer space counts, especially in programming, or on saving your work onto a disk.

CAPS LOCK-KEY Press the CAPS LOCK-KEY until it clicks into its down (on) position. When the CAPS LOCK-KEY is on, all alphabetic letters are in uppercase, the way they are printed on the Apple IIe keyboard. No other keys are affected, which is extremely convenient because you can have uppercase letters and still type numbers. With the CAPS LOCK-KEY pressed again, it clicks into its up (off) position. With CAPS LOCK-KEY off, you have full upper and lowercase letters. Even with CAPS LOCK-KEY on, you must use the shift key to get the upper characters on the numeric keys, such as # on the 3 key.



SHIFT-KEY This key is used for capital (upper case) letters, numbers, and the special keys (!@$%.....Usually the upper half of the numeric keys will show up when the shift key is pressed at the same time as the numeric key.)

LEFT ARROW-KEY Moves the cursor one space to the left.

RIGHT ARROW-KEY Moves the cursor one space to the right. example: use the left and the right arrow keys to go from the beginning of a sentence to the end of a sentence to correct an error.

UP ARROW-KEY Moves the cursor up one line at a time.

DOWN ARROW-KEY Moves the cursor down one line at a time. example: use the up and the down arrow keys to go from the top of the page to the bottom of the page to correct an error.

ESC (ESCAPE)-KEY This key, when pressed, may get you out of some programs. It may also, in some programs, take you from the middle and return you back to the beginning.

ZERO (0)-KEY This key is located in the upper top row of keys on the keyboard. All the numeric keys,as well as the special punctuation keys on in this top row.

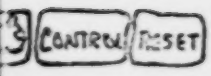
ONE (1)-KEY This key is located in the same section of the keyboard as the zero key and all of the numeric keys.

LETTER O-KEY This key is an alphabetic key and is located in the main keyboard. Try not to get it confused with the numeric zero.

LETTER L-KEY This key is also an alphabetic key and is located in the main key board. When it is not capitalized it may look just like the number one. Be careful not to confuse the number one and the small letter l.

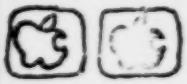
***NOTE: THE COMPUTER WILL NOT ACCEPT A LETTER FOR A NUMBER AND VISA VERSA. ALWAYS BE SURE TO PRESS THE NUMERIC KEYS FOR ALL NUMBERS AND THE ALPHABETIC KEYS FOR ALL LETTERS.

(Y/N) This may be a question that the computer will ask you. The computer is wanting a "yes or no" answer. You can reply either "y" or type "yes". Usually the computer will recognize either the letter or the typed word. This also applies for your answer if it happens to be "no".

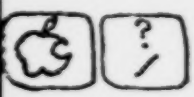


OPEN APPLE-KEY, CONTROL-KEY, and RESET-KEY When these three keys are pressed at the same time, then released, the computer can either start up or do a restart of your program. SEE HOW TO BOOT THE DISK.

*NOTE: The CONTROL-KEY is also known as the "CTRL-KEY".



OPEN APPLE-KEY, CLOSED APPLE-KEY These two keys are computer help keys to be used in conjunction with some software programs. They help give the computer special instructions.



OPEN APPLE-KEY, QUESTION MARK-KEY These two keys, when pressed at the same time, are also help keys. They instruct the computer to give you special instructions to help you with the program that you are using.

— CURSOR This is the little flashing dot, or square, that you see on your monitor screen. There are different cursors that may appear from time to time, but they generally differ depending on what program you are using.

CATALOG This is a list of all the files on a disk. It is sometimes called a menu or a directory. It may give you information concerning space on a disk, what type of program you have, and it may even be able to tell you if your files are protected or not. SEE HOW TO GET A CATALOG.

PROGRAM This is a set of instructions that tell the computer what to do. There are basically two types:

1. system programs- these usually come with the computer. They may even be already installed in the computer's memory.
2. application or software packages- these usually are set up to do a specific job. They may be purchased already written or written for you by a programmer.

BACKUP DISK This term refers to a copy of your original computer program disk. It is highly advisable to backup all of your disks with important information on them.

SAVE This instructs the computer to save a copy of the program that you wrote onto a disk.

RUN This tells the computer to execute the program that is presently in the computer's memory.

RUN This followed by a program name tells the computer to execute the specified program. (RUN HELLO).

BRUN When executing a binary program, you type BRUN followed by the program name instead of run. (BRUN HELLO).

HOW TO GET A CATALOG (USING DOS 3.3 MASTER DISK)

1. Refer back to the instructions on HOW TO BOOT A DISK (with the computer on).
2. Be sure the red In Use light on the disk drive 1 is off.
3. Carefully insert the DOS 3.3 Master Disk into the disk drive.
4. Close the disk drive door.
5. Hold down the OPEN APPLE KEY, the CONTROL-KEY, and the RESET-Key, press all three at the same time. Then release all three keys.
6. After a few minutes a title will appear on your computer monitor screen. At the very bottom of the screen, on the left, you will see the little blinking cursor. Simply type the word CATALOG and press the return key. Then just watch the screen.

WHAT APPEARS AFTER CATALOG HAS BEEN TYPED?

1. A list of all the program or file names on the disk together with the following information:
   A. If an asterisk (*) is to the left of a program name, that means that it has been locked for protection.
   B. A - in front of the name, means that the program was written in APPLESOFT BASIC.
   C. I - in front of the name, means that the program was written in INTERGER BASIC.
   D. B - in front of the name, means that the program is a binary program.
   E. T - simply means that this is a text file.
   F. The number just to the left of the program or file name indicates how many sectors long the file is. Three sectors is a small file, 100 sectors is a large file,
   G. You will also see the program or file names which may be from 1 to 30 characters long. DOS will shorten longer file names to 30 characters. A file name must begin with a letter. Any typeable character except the comma (,) may appear in the name.

COMPUTER LICENSING TEST - Grade 4 and up

Attachment 3

TRUE OR FALSE Write the word true or false on the answer sheet.

1. To start a computer program you "kick" the disk.

2. When the computer is on, the only way to begin a new program is to turn off the computer and turn it on again.

3. The IN USE light on the disk drive front should always be on when you change the disks.

4. If the computer seems to be stuck, pound on the keys.

5. The disk drive door must be completely closed before the disk may be used.

6. Keep disks away from magnets, electrical appliances, and large motors (especially televisions and telephones).

7. Label disks with a sharp, hard pen.

8. Floppy disks may be folded to fit into a storage box.

9. Some of a disk is open to view so the disk drive can read or write to it.

10. The best way to store disks is to remove from envelopes and stack horizontally.

MULTIPLE CHOICE. Write the CAPITAL letter for the correct answer on the answer sheet.

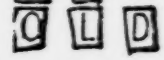
11. The -- is a set of instructions which tell a computer how to work.
    A. disk
    B. program
    C. cassette

12. The -- may be a flashing square, a solid square, or an underline.
    A. cursor
    B. delete
    C. space

13. The menu or -- lists the programs already on the disk. To see the menu, type in this other word for menu.
    A. sector
    B. diner
    C. catalog

14. The -- shows where the next typed information will appear on the screen.
    A. cursor
    B. question mark
    C. star

15. To correct an error in the middle of a word you have just typed, use the --.
    A. ← then return.
    B. → then ←.
    C. ← then →.

16. To type the word old, use the --.
    A.
    B.
    C. 

17. The -- puts spaces between characters (letters and numbers).
    A. return bar
    B. space bar
    C. ESC key

18. The -- is the first key to use to try to get out a program.
    A. ESC
    B. reset
    C.

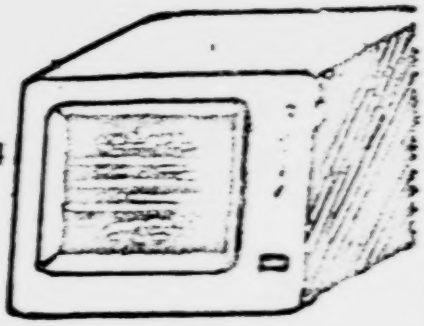
19. To type an *, use these keys:
    A.
    B.
    C.

20. -- will produce capital letters.
   A. Only the CAPS LOCK
   B. Only the SHIFT
   C. Both SHIFT and CAPS LOCK

21. When you have finished reading or typing a line, push the -- key.
   A. SHIFT
   B. RETURN
   C. CAPS LOCK

22. A -- is a thin, flexible circle of magnetized material used to store information.
   A. record
   B. disk
   C. loop

23.

24 

25.

Choices for 23, 24, and 25:
   A. disk drive
   B. monitor
   C. cassette drive
   D. disk
   E. computer/keyboard

PLEASE RETURN TEST AND YOUR ANSWER SHEET. YOU MAY TAKE THIS TEST UNTIL YOU REACH THE PASSING SCORE. IF YOU NEED TO TAKE THIS TEST AGAIN, YOU MUST WAIT 1 WEEK. PART 2 OF THE TEST IS A PRACTICAL AND MUST BE SCHEDULED INDIVIDUALLY.

GENERAL SHERMAN COMPUTER PROFICIENCY TEST

NAME _____ SUBJ. TEACHER _____/____ DATE _____

PART A A passing score on Part A will entitle the student to a computer la card and allow the student to work in the computer lab on teacher-assigned work.

YES	NO		SKILL
___	___	1.	When should you not insert a disk into the disk drive?
___	___	2.	When should you not remove a disk from the disk drive?
___	___	3.	When there is no disk in the disk drive, how do you get the disk drive to stop whirring and the IN USE light to go out?
___	___	4.	Insert the disk into the drive.
___	___	5.	Turn on the monitor.
___	___	6.	Turn on the computer.
___	___	7.	Follow the directions on the disk.
___	___	8.	What happens if you press CTRL - OPEN APPLE - RESET?
___	___	9.	Suppose it's the end of the period. You want to stop the program and remove the disk. What do you do?
___	___	10.	Point to the CAPS LOCK key.
___	___	11.	Turn the printer on.
___	___	12.	Roll the paper forward.

Lancaster City Schools General Sherman Junior High School Sue Hothem

GENERAL SHERMAN COMPUTER PROFICIENCY TEST

NAME _____ SUBJ. TEACHER _____/____ DATE _____

PART B PROGRAMMING

A passing score on Part B will allow the student to work in the computer lab on teacher-assigned work or independent programming.

COMMANDS

CATALOG	NEW	LOAD
RUN	LIST	PRINT " "
PRINT	HOME	SAVE
PR#1	GR	COLOR =
TEXT	PLOT --,--	
VLIN --,-- AT --	HLIN --,-- AT --	

_____ 1. clears the screen to black

_____ 2. prepares the computer for graphics

_____ 3. carries out or executes a program

_____ 4. stores a program in memony onto a disk

_____ 5. clears a program from memory

_____ 6. prepares the printer to receive information

_____ 7. shows all the lines of a program

_____ 8. puts a program from disk into memory

_____ 9. used to select what shade will be used in graphics

_____ 10. will dra a line across a portion of the screen

_____ 11. will place information in quotes on the screen

_____ 12. will place a block of color on the screen

_____ 13. will show all programs on a disk

_____ 14. will place results of number problems on the screen

_____ 15. will draw a line top-to-bottom on the screen

_____ 16. to clear graphics from the screen

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PART B PROGRAMMING continued

SPECIAL KEYS

return	shift
caps lock	control c
control, reset	control, open apple, reset

_____ 17. must be pressed down to enter commands

_____ 18. used to stop disk drive when starting Apple computer without a disk

_____ 19. pressed to enter a statement into memory

_____ 20. used to print the top characters on the keys

_____ 21. used to boot the disk

_____ 22. used to stop a program

TERMS

?SYNTAX ERROR	boot the disk
line number	graphics

_____ 23. must be typed in fron of each statement

_____ 24. way of "designing" pictures on the computer

_____ 25. a message you will see when a mistake has been made in typing a command

_____ 26. to get the disk drive started and begin running a program

BEST COPY AVAILABLE

On the graph at the bottom of the page, draw what you would see by following these program statements.

```
HLIN 10,20 AT 3
VLIN 3,20 AT 10
HLIN 10,20 AT 20
VLIN 3,20 AT 20
PLOT 13,7
PLOT 17,7
PLOT 15,11
PLOT 13,14
PLOT 13,15
PLOT 17,14
PLOT 17,15
HLIN 14,16 AT 16
```

Look at the shaded areas at the bottom of the graph. Write the statement used to "draw" each one.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

GENERAL SHERMAN JHS Computer Lab Card No.____

Name_____ _____ Home Room ____
last first

This student has passed the General Sherman computer proficiency test and is aware of the proper procedures for handling computer equipment and programs.

_____/____ _____
Teacher per Principal

This card will be revoked if the student fails to comply with school and computer lab rules.

STUDY HALLS and LUNCH PER.		M	T	W	T	F
	1	-	-	-	-	-
	2	-	-	-	-	-
	3	-	-	-	-	-
	4	-	-	-	-	-
	5	-	-	-	-	-
	6	-	-	-	-	-
	7	-	-	-	-	-
	8	-	-	-	-	-
	9	-	-	-	-	-

Card Revoked: Date_____ By_____
Reason:

GENERAL SHERMAN JHS

COMPUTER LAB

Guidelines For Student Use

1. A student computer lab card will be issued to a student by one of the student's subject teachers after the student has successfully completed the General Sherman Computer Proficiency Test.

2. A student must present his/her computer lab card to the parent monitor in the computer lab to be admitted.

3. Students will sign up for the computer lab in the library.

    A. The student will receive his/her computer lab card from the librarian.
    B. The student's name will be written on the sign-up sheet and intended use will also be marked.
    C. After signing up, the student will then go to the computer lab and present his/her lab card to the parent monitor.
    D. The parent monitor will then assign the student to a specific computer for the period.
    E. Students should place books, jackets, book bags, etc. on the desks. Only necessary materials should be taken to the computer.
    F. The librarian will send the student sign-up sheet to the lab to be checked by the parent monitor. A list of the names of the students in the lab will also go to study hall for attendance.

4. Priorities for use of the lab by students.

    A. Limit of one period per day.
    B. Students will remain in the lab for the full period, unless special permission is obtained from a teacher.
    C. Students will be admitted into the lab on an assignment basis priority.

        1. Computer literacy assignments.
        2. Computer assisted instruction.
        3. Teacher-assigned projects.
        4. Computer proficiency test.
        5. Recreational use (programming, graphics, etc.)

5. Computer program and disk sign-out procedures.

    A. All software and disks will be signed out on the green card (similar to signing out a library book).
    B. Software programs and disks do not leave the lab and must be checked back in five minutes before the end of the period.
    C. School-supplied disks may be used with teacher permission. School disks must remain at school.
    D. Individually-purchased (blank) disks may be used.
    E. With teacher permission, disks may be stored in a math teacher's disk container.

6. Printer use will be free. A limit of 3 sheets per individual per period

7. Open lab times will be posted weekly in the library and on the computer lab door.

8. The computer lab will be open only when adult supervision is available.

GENERAL SHERMAN JHS

COMPUTER LAB RULES

1. Proper care must be shown in handling all computer equipment, programs and disks.

2. Respect other students' and teachers' projects and programs. You are not to use anyone else's disk or program without permission.

3. All school conduct rules apply in the computer lab.

4. Recreational video games are not permitted.

5. Take only necessary materials with you to the computer. All other books, etc. should be put on the desks.

6. Talking is to be kept at a minimum and at a low tone.

7. Once in the computer lab, students are to stay until the end of the period.

8. Respect the parent monitor.

Note: Penalty for infractions of these rules will be the loss of the computer lab card plus any other normal school punishment.

Lancaster City Schools General Sherman Junior High School Sue Hothem

RULES FOR RESPONSIBLE USE OF COMPUTERS

1. Enter the computer lab in an orderly and courteous manner.

2. Follow school rules when checking out computer disks and material.

3. Problems with software: 1) If you have difficulties running a prepared program, contact the lab supervisor. 2) If you notice that another student is having difficulties or is not operating a program correctly, contact the lab supervisor.

4. Problems with hardware: 1) If any piece of computer hardware does not seem to be working correctly, contact the lab supervisor. 2) Too much moving about and/or horseplay can result in accidental damage to computer equipment, so lab conduct should be purposeful and responsible.

5. Follow school rules for returning and replacing all software and materials and allow yourself sufficient time for clean up. Lab should be left neat and orderly for the next group.

RESPECT PROGRAMS OF OTHER INDIVIDUALS

Like you, other students and teachers have worked hard writing programs for the computer.

When working in the computer lab, you might be using disks which contain other student- and teacher-developed programs.

Only with permissiion from the programmer and/or of the lab supervisor will you be allowed to run another person's program.

Should you decide to use other people's programs without their permission, computer lab privileges may be revoked.

COPYRIGHT LAWS

When a company publishes a computer program to sell to schools, businesses and individuals, that program becomes protected by copyright laws. This means that no group or individual has the legal right to copy the program in any way. In other words if a person purchases a computer game or word processing program, that person is not legally permitted to make a copy of the program to give to a friend.

Can you name other types of materials protected by copyright law?

GENERAL SHERMAN JHS

COMPUTER LAB

I. General Computer Lab Policies

A. The computer lab will be under adult supervision at all times in which students are working in the lab. During "open lab" periods, a parent monitor will supervise the lab. During class group activities, the teacher will be in charge. The lab should not be left unattended.

B. The parent monitor or teacher will be responsible for following the software sign-out system.

C. The parent monitor will admit students from study hall and classes on an assignment priority basis.

1. Computer literacy assignments.
2. Computer assisted instruction. (CAI)
3. Teacher-assigned projects.
4. Computer proficiency test.
5. Recreational use.

(Passes from teachers required for 1 through 4.)

D. In case of problems with computer hardware or software, the parent monitor or teacher will complete a "Trouble Sheet" and discontinue use of that hardware and/or software. Trouble sheets are to be given to the librarian promptly.

E. The computer lab will be locked when not in use or when there is no parent monitor.

II. Scheduling policies and procedures.

A. A weekly schedule will be posted in the library each Friday for the upcoming week.

B. Priorities for lab scheduling will be:

1. Class group - supervised by teacher
   a. Literacy classes
   b. Other class projects
2. Elementary literacy classes
3. Open lab - for students to attend the lab from study hall or clases

C. Scheduling of class time should be done by the Thursday before the upcoming week to insure getting requested times.

D. Lab times requested after Thursday will then be scheduled on an as available basis.

E. Before and after school use of the lab by students will be determined by the availability of an adult supervisor.

III. General Sherman Computer Proficiency Test

In order to determine if a student is "qualified" to work in the computer lab, the student must pass a two part proficiency test. The test will be given in the computer lab by the monitor. (There should be some time set aside near the beginning of the year for a class review of procedures, terms and commands.) To take the test, a student must have a pass from a subject teacher. A student's test results will be sent to the subject teacher who may then issue a computer lab card. (See illus.)

Part A of the proficiency test will evaluate the student's awareness of proper computer operating procedures using packaged programs. The student must be able to turn the equipment on and off, run a program, describe certain precautions when using disks and know some basic terminology.

A passing score on Part A of the C.P.T. will entitle the student to a computer lab card and allow the student to work in the computer lab on <u>teacher-assigned</u> work.

Part B will test the student's knowledge of how to operate a computer with a teacher- or student-produced disk. The student must show a working understanding of such terms and commands as CATALOG, RUN, LIST, HOME, NEW, PRINT, return, control-reset, shift key, etc.

A passing score on Part B will allow the student <u>independent</u> use of disks prepared by teachers (with permission) and will permit the student to use the computer lab for individual programming.

When a student passes Part A, the subject teacher will issue a computer lab card to the student. This card is to be given to the librarian. All lab cards will be kept filed in the libraray.

When a student passes Part B, the computer lab card will be marked so the librarian and parent monitor will know the student may work independently.

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COMPUTER USE FOR SUBJECT TEACHERS

The following questions are intended to direct your thinking concerning the use of computers and computer programs for your classes.

1. Which area of the curriculum do I want to supplement? What are my objectives?
2. What software programs are available in this area?
3. Review the documentation.
4. Which program is appropriate for my students?
5. What additional information do I need about the program selected?
6. How will this program be introduced to my students?
7. What directions do the students need to use this program?
8. How will the students be scheduled for computer time?
9. How will records be kept concerning student use of the program?
10. How will the effectiveness of the program be evaluated?

Lancaster City Schools General Sherman Junior High School Sue Hothem

GENERAL SHERMAN JHS

COMPUTER LAB

HARDWARE/SOFTWARE TROUBLE SHEET

Date _____ Per. _____ Teacher/Monitor _____

Describe in detail any problem encountered with computer hardware and/or software.

****

HARDWARE PROBLEM

Computer # _____ _____

Disk Drive # _____ _____

Monitor # _____ _____

Printer # _____ _____

Software being used at the time _____

Person/s using the equipment _____

****

SOFTWARE PROBLEM

Name of the program, call no., Gen. Sher. disk #, and/or any other pertinent identification.

_____

Problem: _____

Hardware being used at the time.

Computer # _____

Disk Drive # _____

Monitor # _____

Printer # _____

Person/s using the equipment _____

****

If any equipment or software is rendered unusable during your time of lab supervision, place a DO NOT USE label on the hardware or put the software in the DO NOT USE software container.

COMPUTER LAB STATISTICS GENERAL SHERMAN JUNIOR HIGH

MONTH _____

_____ DAYS OF SCHOOL

_____ PERIODS USED BY STUDENTS

_____ PERIODS USED BY STAFF

_____ PERIODS CLOSED

_____ STUDENTS IN LAB (DURING STUDY HALL)

_____ AVERAGE # OF STUDENTS PER DAY

_____ AVERAGE # OF STUDENTS PER PERIOD

Lancaster City Schools General Sherman Junior High School Sue Hothem

COMMANDS	TYPE OF EXECUTION
CATALOG	Displays all programs on the diskette.
LOAD name	Loads program called name into memory.
RUN name	Executes program called name.
LIST	Lists program in memory. (LIST 10,50 will list all line from 10 through 50.)
SAVE name	Stores current program onto disk and calls it name.
DELETE name	Removes program called name from the disk.
NEW	Deletes current program from memory. (Program, if saved, will still be on the disk.)
HOME	Clears the screen and puts the cursor at the top but does not erase program from memory.
PRINT " "	Causes the computer to print the exact information with the quotation marks.
PRINT	Used with numbers. (PRINT 3 * 4 will cause '12' to be printed.)
GR	Places you in low resolution graphics (color) mode. (40 wide x 48 high)
COLOR =	Tells the computer which color to use. Equal sign must be followed by a number.
PLOT --,--	Tells the computer to plot a block of color. PLOT 3,4 (A rectangle of color will appear at 3 across, 4 down.)
HLIN --,-- at --	Tells the computer to draw a horizontal line. HLIN 8,25 at 15 (A horizontal line will appear 15 lines down, from 8 to 25.)
VLIN --,-- at --	Tells the computer to draw a vertical line. VLIN 12,32 at 17 (A vertical line will appear from 12 to 32 at th th line across.
TEXT	Gets you out of graphics, back into text mode.
HOME	Clears the screen but does not erase the program from memory.

SPECIAL KEYS

control C	Used to halt program.
control reset	Used to stop the disk drive when you turn on the computer without a disk.
control open apple reset	Used to boot the disk if machine is already on.

PREPARING NEW DISKS FOR USE

When you buy blank disks, they have nothing recorded on them - just like a blank tape for a tape recorder. Before a disk can receive information, you must prepare it using the INIT command. This preparation process is called initializing or formatting and just writes concentric circles of zeros (called tracks) on the disk, like chalk lines on a racetrack, so the disk drive knows where to write information later.

1. Put the DOS 3.3 SYSTEM MASTER disk into drive 1. Restart or boot the system.

2. When Applesoft's] appears on the screen, remove the DOS 3.3 SYSTEM MASTER disk. Place a blank disk in drive 1 and close the drive door.

3. Make sure CAPS LOCK is down. To make a greeting program to put on your new disk, first type NEW and press RETURN to erase anything in memory.

4. Now type this three-line program, substituting your name and the date in the second line. Press RETURN after typing each line.

```
10 PRINT " PROGRAMS CREATED BY (OR FOR)"
20 PRINT " (your name)  ON  (date)"
30 END
```

5. Type INIT HELLO and press RETURN. The disk drive will whir for a while. When formatting is complete, the cursor will reappear on the screen and the IN USE light on the disk drive will go out.

6. It is a good idea to test the disk to make sure it is in fact formatted. Type CATALOG and press RETURN. You should see a short catalog like this:

```
DISK VOLUME 254
A002 HELLO
```

7. Warning: The command INIT HELLO will erase all information on a disk, so be certain you are using a blank disk or a disk of programs you no longer need.

SAVING A PROGRAM

1. Boot a disk before you type in a program.

2. Type in your program. (Example)

```
10 FOR N = 1 TO 5
20 PRINT "HAVE A GOOD DAY"
30 NEXT N
40 END
```

3. Decide on a name for your program. Type SAVE name . The disk drive IN USE light will come on for a few seconds while the computer is saving your program.

4. To see if your program has been saved, type CATALOG and press RETURN. Your program name should appear in the catalog listing.

RUNNING A PROGRAM FROM A STUDENT/TEACHER PREPARED DISK

1. Boot the disk.

2. Type CATALOG and press RETURN.

3. When you find the program you wish to run, type RUN name and press RETURN.

4. If you wish to list the program lines, type LIST. (If the program is not in the computer's main memory yet, you must first type LOAD name.

USING THE PRINTER

TO PRINT PROGRAM LISTING OF LINES

1. Be sure the printer has paper and the paper is inserted properly. (If the printer does not have paper, see the computer lab monitor.)
2. Do not turn the paper-feed knob when the printer is ON.
3. Turn the printer ON.
4. Type PR#1 to prepare the printer to receive data from the computer.
5. Type LOAD name. (Be sure your program has been saved to disk first!)
6. Type LIST. The printer will print the program listing.
7. Turn OFF the printer. Turn the paper-feed knob to advance the paper so you can carefully tear off the hard copy of your program.

WITH A PURCHASED PROGRAM

1. Some purchased programs for school allow you to make a hard copy of the results of your work. Follow any directions given on the program. If in doubt about directions, see the lab monitor.

REMEMBER: Turn paper-feed knob only when the printer is OFF.

Lancaster City Schools General Sherman Junior High School Sue Hothem

* * * * * KIDS ON THE COMPUTER * * * * *

Students are now beginning to work on the computer and the kids are quite excited and receptive to "computing".

Some of you who have worked on the computer and would like to put some students on are asking, "How do I go about showing the kids what to do?"

We have a few different approaches you might try.

1. A video tape which can be shown in your classroom to the entire class or to the students you've selected to work on the computer.

2. There is a very good training disk which showsstudents some of the main features of the Apple II.

3. We have some fantastic audio-visual materials on approval which can be shown to your classes. We should take advantage of this "free" opportunity.

4. There are booklets of 14 lessons (from Kids and the Apple) which students can use at the compute . These could be done during a student's study hall period, after the teacher has made an initial visit to the computer computer with the student.

Once you feel a student can work independently at the computer, you can send him/her to the media center during his/her study hall.

A list of students who are authorized to use the computer independently will be posted in the office and the library. Keep Mrs. Hothem informed of students who gain permission to work without assistance.

COMPUTER SYSTEM RULES

You are given a great deal of responsibility in using the school's computer facilities. You will be expected to make arrangements to come into the lab and work on your own. You are expected to work independently. You will have free access to our facilities to do your work within the following guidelines.

A. You are permitted to access the computer system from your account only. You are exclusively responsible for your account and its storage space.

B. No food or drink is permitted in the lab area.

C. Computer equipment must be used in a proper and respectful manner and only for assigned or school-related work. Printers may only be used for assigned programming work in this class. Computer equipment may not be used for outside activities, clubs, or businesses.

D. Sign-up procedure.

In order to reserve a terminal for your use you must sign up on the chart in accordance with the following.

1. In advance of the day you wish to come in.

You may sign up for any ONE module you desire on any day. You may not sign up for the same module on consecutive days.

The chart shows all available periods, with each period broken into two modules. Each module contains six blocks- one for each of six video terminals. Sign your last name (no initials) in the block.

2. On the day you wish to come in.

You may sign up for any non-consecutive open blocks during that day. Be certain that you get a pass from Mr. Cowles before school or prior to your class.

When you come in, you will be expected to remain until the end of the module or period. You may not leave the room early. You may not bring your friends into the lab when you come to work during the school day.

E. Microcomputers.

A separate sign up chart is provided for the microcomputers. They may be used by students in accordance with the other rules. Only software written by the student or approved by Mr. Cowles may be used. Other software will be confiscated and will not be returned.

F. Students may not play computer games during the school day on any of our equipment. Games may be played only before 7:40 or after 2:45.

```
INSTRUCTIONAL MANAGER'S MENU --

        1 -- Create Accounts
        2 -- Alter Passwords
        3 -- Alter Quotas
        4 -- Flag Users for Deletion (at EOM)
        5 -- List Directory
        6 -- Zero Directory
        7 -- Display Account Statistics
        8 -- Create Log-in Messages
        9 -- Kill Jobs
        10-- Broadcast Message
        11-- Force Message
        12-- Job Status Check
        13-- File Read
        14-- Execute student program
        15-- Copy file
        16-- Kill file
        17-- Display system statistics
        18-- Alter user priority
        19-- Create account on private pack
        20-- Alter quotas on private pack

                Your Selection (or 'E'xit) <No Default>? _
```

COMPUTER LAB HALL PASS

Issued to: John Smith

Valid only period: 3 First semester

Fred Jones
Computer teacher

To the student:

In order to come to the computer lab during the period shown on the front of this pass you must show this pass to your study hall teacher AND sign their list.

Failure to do so or other invalid use of this pass will result in your loss of this privilege.

Sign up sheet Monday, Feb. 10

LHS Computer Lab

Time	KB21:	KB22:	KB23:	KB24:	KB25:	KB26:
Before school						
1 7:54 - 8:14						
8:15 - 8:35						
2 8:39 - 8:59						
9:00 - 9:20						
3 9:24 - 9:44						
9:45 - 10:05						
4 10:09 - 10:29						
10:30 - 10:50						
5 10:54 - 11:14						
11:15 - 11:35						
6 11:39 - 11:59						
12:00 - 12:20						
7 12:24 - 12:44						
12:45 - 1:05						
8 1:09 - 1:29						
1:30 - 1:50						
9 1:[illegible] - 2:14						
2:15 - 2:35				55		
after school						

L/15

GREETINGS FROM THE LANCASTER HIGH SCHOOL DATA CENTER
12-Feb-86

TO: WILLIS JEFFREY

You have been assigned the following account number and password for the LHS data center computer terminals:

ACCOUNT NUMBER: 140 , 60
PASSWORD: [redacted]

This account number and password must be entered each time that you sign on to the computer. You have been assigned 40 blocks of storage space for your use.

Do not give your password to anyone else, as anyone gaining knowledge of your password and account number has full control of your programs and files.

Be certain to familiarize yourself with all rules governing computer use. Any violation of these rules may result in the loss of this account.

Lancaster City Schools
Lancaster, Ohio

___No

COMPUTER SOFTWARE EVALUATION FORM

The purpose of this form is to guide school personnel in decision-making related to computer software purchasing. Any purchase order for software through Board of Education accounts must be accompanied by a completed copy of this form. The form and purchase order are to be sent to the district Library Supervisor. Any software to be donated to the Board of Education must also be evaluated prior to submission for Board acceptance. The form for such software is to be sent to the Library Supervisor.

Subject Area: ___Language Arts ___Social Studies ___Computer Literacy ___Math
___Foreign Language ___Science ___Health ___Art/Music
___Business ___Home Economics ___Utility ___Administrative
Other: _____

Grade Level or Range: K 1-3 4-6 7-8 9-12 Teachers Other

Program Title: _____ Version: _____

Publisher: _____ Copyright: _____

Vendor: _____ Catalog Number: _____ Cost: _____

Previewed By: _____ School: _____ Date _____

Recommendation: ___Purchase
Computer Type: _____ ___Refuse

Hardware: Check, if required; Circle, if optional use is available in the program.
__1 Disk Drive __2 Disk Drives __Joystick __Printer __Paddles __Mouse __Graphics Pad

BACK-UP INFORMATION

___Backup is included ___Available from publisher $_____
___Can be backed up once ___Can be backed up more than once
___Program available from Library/Media for backup (i.e. MECC)
___Information not available

PROGRAM OBJECTIVES: _____

_____

_____

_____

SECTION I

		CIRCLE	
1.	A major portion of the software relates to existing curriculum.	YES	NO
2.	Program is accurate and grammatically correct.	YES	NO
3.	Program is free of technical problems.	YES	NO
4.	Program operates on your hardware without error.	YES	NO
5.	Program does not "bomb" after erroneous or accidental input.	YES	NO
6.	Simple instructions for use are contained within the program or in a manual.	YES	NO
7.	Difficulty level is appropriate for the ages of students intended.	YES	NO

NOTE: If "NO" is circled for any statement in Section I, the program should not be recommended or purchased unless adequate justification is provided.

COMMENTS:

CUR-2
(Rev. 12/84

SECTION II

CIRCLE

1. Additional student or teacher materials are included. YES NO
   Please list: _____
   _____
2. The program contains a record-keeping system for student performance. YES NO
3. The program can produce a print-out (hard copy). YES NO
4. The program can be altered and/or adapted. YES NO
5. The program contains a management system (teacher can preprogram assignments, program keeps record of student and/or class performance). YES NO
6. The program incorporates various levels of difficulty. YES NO
7. Graphics are a part of the program. YES NO
   The graphics enhance the program. YES NO
8. Sound is a part of the program. YES NO
   The sound is used effectively. YES NO
   The sound can be turned off. YES NO
9. The disk drive is accessed while the program runs. YES NO
10. This program is an appropriate medium for presenting the material covered. YES NO

SECTION III

1. Estimated time to complete on program or section: _____
2. Number of programs or sections: _____
3. Check the most appropriate descriptor.

Type of Program

___ simulation
___ educational game
___ drill and practice
___ tutorial
___ management
___ problem solving
___ authoring
___ utility
___ testing
___ other _____
_____

Instructional Purpose

___ standard instruction
___ remediation
___ enrichment
___ other _____

Instructional Grouping

___ individual student
___ small group
___ classroom group
___ other _____

4. If purchased, which of the following would apply to your class(es)?

   It would be required of ___all ___most ___some ___no student(s).
   It would be recommended to ___all ___most ___some ___no student(s).

5. How often (per year or course) would you use or assign this program?

   ___one day ___ two-four days ___one week ___ more often

6. Contents of the software: _____
   _____
   _____
   _____
   _____
   _____
   _____

LANCASTER CITY SCHOOLS
COMPUTER STEERING COMMITTEE

LABORATORY USAGE RECOMMENDATIONS

1. All students should pass some type of a proficiency test prior to being permitted to use the computers independently. The nature of this test will necessarily vary depending on the age and ability of the student.

   This test should be administered to students annually.

2. Students should be permitted to use the computer lab only for an assigned purpose. This purpose may involve running programs, writing programs, or other activities requiring the computer. Students should not be permitted to use the lab unless they have some assigned purpose for being there.

3. During their time in lab, students should be permitted to use only one disk of software. Students should not be permitted to exchange disks with each other.

4. The number of students using the lab in any period should be restricted. The committee recommends that this use be controlled so those needing a printer or other special hardware can have access to specific machines.

5. Instructors may assign their classes or individual students to run specific pieces of software. Like any educational resource, this software must be previewed by the instructor for suitability, and its operation be explained and/or demonstrated to the class prior to making the assignment.

6. There should be no unsupervised usage of the computer lab by students.

7. Students should not be permitted to bring in disks of software, nor make copies of any software.

8. It is recommended that a priority list be established for lab use. This list could be:

   1) Use by classes and students in the computer literacy curriculum.

   2) Use by an entire class in the lab.

   3) Teacher use.

   4) Assigned student use to run educational software.

   5) All other use.

It is essential that the computer literacy curriculum be given priority for lab use, since the machines were bought for this purpose.